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**WORKING GROUP ON THE IMPACT OF GLOBALISATION ON NATIONAL
ACCOUNTS: RESEARCH AGENDA**

CONSOLIDATED LIST OF PROBLEM AREAS

The purpose of the Working Group on the Impact of Globalisation on National Accounts (WGGNA) is to identify main distortions in the compilation of national accounts caused by the growing globalisation of economies and to propose ways to deal with these distortions and to improve the accuracy of the data. This document presents a list of well-recognized problem areas that are included in the research agenda of the WGGNA.

A first draft of this paper was prepared by the UNECE Secretariat on the basis of contributions by the members of the leadership group (LG) of WGGNA and presented for discussion to the first WGGNA meeting in April 2008. The final version incorporates the comments received by WGGNA.

I. BACKGROUND

1. At the biennial UNECE/Eurostat/OECD meeting on national accounts in Geneva in April 2006, a day was devoted to the impact of globalisation on national accounts. In view of the high level of interest, it was proposed to consider follow up work to explore how national accounts are affected by globalisation and propose operational guidelines to address these effects.
2. In June 2006, the Conference of European Statisticians (CES) reviewed a Rapporteur Report on Globalisation Statistics prepared by Statistics Canada and ONS, United Kingdom and decided to create a body to coordinate the work on globalisation statistics. Following a series of

consultations, the Working Group on the impact of Globalisation on National accounts (WGGNA) was established in 2007.

3. Furthermore, it was decided to set up a leadership group (LG) to steer the work of the Working Group and report on the progress of work to the Conference and its Bureau. The leadership group is composed of Canada, Czech Republic, Finland, Netherlands, United Kingdom, USA, UNECE, OECD, Eurostat and IMF.
4. According to the terms of reference, approved by the CES Bureau, the objective of the WGGNA is “to review the main distortions in the compilation of national accounts and related source statistics, as caused by globalisation and to “put forward proposals to deal with these distortions so as to improve the quality of national accounts”.
5. The WGGNA met for the first time on 23-24 April 2008, back-to-back with the Joint UNECE/OECD/Eurostat Meeting on National Accounts. The leadership group of the WGGNA met twice: on 8-9 October 2007, and, after the meeting of the WGGNA, on 25 April 2008.
6. At the start of its work the WGGNA agreed on a research agenda. The leadership group prepared a preliminary list of problem areas and submitted it for discussion to the first meeting of the WGGNA. Countries had also the possibility to propose changes via written consultation after the meeting. This paper presents the results of the consultation process.
7. The research agenda includes four broad groups of topics linked to the effects of globalisation on compilation of national accounts:
 - (a) Problems linked to allocation of value added and income to national economies;
 - (b) Specialisation of supply chains;
 - (c) Issues in relation to households, persons and employment; and
 - (d) Other issues linked to globalisation.
8. These problems are just an indication of the challenges posed by increasing globalisation to the compilation of national accounts for a country. The list below presents well recognised areas where there are measurement problems. Countries are invited to comment on the proposed list, fill identified gaps and set the priority areas.

II. GLOBALISATION AND ITS IMPACT ON NATIONAL ACCOUNTS STATISTICS

9. Globalisation can be characterized as the increasing “easiness” of economic transactions occurring across national boundaries. They are easy because of the following reasons:
 - (a) Lowering of trade barriers;
 - (b) Accessibility and cheapness of foreign travel;
 - (c) Internet enabling quicker conduct of business abroad;
 - (d) Increased ability of companies and people to operate abroad.
10. While some of these factors were at play in the past, their impact intensified in recent years leading to the rise of foreign trade, of increased household spending abroad, of multinationals (MNEs) spanning the world in their economic activities and increasing their share of world trade.

11. The increase of economic transactions across national boundaries has made it more difficult to measure economic transactions from a national viewpoint. The lowering of trade barriers and the activities of MNEs have resulted in the production function being spread across national borders, with a significant increase of goods traded between affiliated companies. Also more and more services are provided across the world, for example computer software services. Other examples relate to outsourcing of activities such as “call centres”, financial services, and marketing and sales.

12. MNEs can move these goods and services across the borders with no change in economic ownership and/or use transfer pricing to value the inputs and outputs of such goods and services. In some cases, no value at all is attributed to the services provided. The use by statisticians of valuation alternative to the transfer pricing methodologies to value these goods and services will affect not only the revenues and expenses of the units involved but also their earnings (direct investment income), retained earnings, dividends as well as equity. As such, it is challenging for statisticians to measure the value of goods and services as they have also to take into consideration that using alternative methods of valuation on goods and services will entail them also adjusting related accounts, such as direct investment earnings, etc.

III. ALLOCATION OF OUTPUT AND VALUE ADDED TO NATIONAL ECONOMIES

13. The national boundaries are of limited importance to MNEs. Information on the transactions and other flows between the branches located in different countries cannot be easily obtained in an individual country. Often, only the headquarters of a MNE has the necessary detailed information. In this context, the following questions should be considered:

- (a) Can we draw national boundaries any more and can we produce national statistics at all? Should we compile accounts at global level, European and North-American level and then regionalise the data, or compile only some regional data?
- (b) Do we need to involve tax experts to provide guidance on rules for the calculation of transfer prices of international transactions? It is feared that measurability of the national economy in general and GDP in particular might be biased by the use of transfer pricing within MNEs (among others for reasons of minimisation of the tax burden) that differ from market prices (the latter are consistent with international statistical guidelines). The resulting allocation of operating surplus and profits to countries directly affects the allocation of value added as reported by the companies, particularly in the cases of patents, virtual manufacturing, foot-loose production, and other situations where there is little or no physical dimension associated with the production.
- (c) How to arrive at a consistent recording of transactions, between different national statistics and between different countries?
- (d) Frequent changes in the structure of MNEs.
- (e) The sensitivity of MNEs with regard to confidentiality of their data and the attempts to reconcile their reporting to different statistical agencies.
- (f) Revisions of data can come at a late stage as enterprises reassess the valuations attributed to different parts of their operations; changes in accounting practices can have similar effects.

IV. SPECIALISATION OF SUPPLY CHAINS

14. The process of increased specialisation is occurring both within vertically integrated MNEs (i.e. foreign direct investment) and across companies without ownership links. The international statistical communities are aware of the measurement problems resulting from forcing national frameworks into companies that organise their production globally, or that adjust their financial reporting to minimise their overall tax liability. International specialisation challenges some working assumptions on structural ratios of businesses such as turnover to gross value added that are used to produce key economic statistics.

A. Transactions in intellectual property (e.g. R&D)

15. Little is known about the flows of intellectual property and related income. Companies exchange intangible assets such as business and technological knowledge with their foreign suppliers and subsidiaries as they set up global supply chains across national borders. The following issues can be identified:

- (a) Intra-company flows of R&D services. It is not straightforward to determine within MNEs the exact location of use of R&D capital services in production. There are problems to measuring R&D import and export flows.
- (b) Ghost services from intellectual property, such as computer software used globally.
- (c) Return to capital for intellectual property, as a means of determining economic profit centers.
- (d) Measurement of (multifactor) productivity.

B. Special Purpose Entities (SPEs)

16. Three types of Special Purpose Entities (SPEs) can be distinguished. The first (and perhaps most important) category consists of financing and holding companies that act as a financing chain on behalf of the non-resident parent company. This type of SPE is characterized by large cross-border financial transactions.

17. The second category of SPEs consists of royalty and licence companies. These companies have been given ownership of intellectual property rights by their parent companies and collect income in the form royalties or as fees on (sub) licences. These flows are recorded as exports of services. The revenues are transmitted to the parent company in the form of exports of royalty and licence fees or in the form of dividends.

18. The third group of SPEs are factoring corporations that conduct the invoice of sales of the worldwide company on behalf of the parent company. These SPEs do not relate to the domestic economy, but only conduct the settlement of international payments for the sales of the worldwide company. Most SPEs are financing vehicles for non-resident mother-companies. They own foreign daughter companies and facilitate financial flows for the worldwide company. They do not normally have any real substantial economic relations with the domestic economy and almost entirely engage in cross-border transactions.

19. With regard to the treatment of SPEs the following questions arise:

- (a) What criteria can be used to determine the residency of the relevant unit?

- (b) How can SPEs be defined and how to deal with complex groups of units owned by non-residents?
- (c) How the relevant monetary flows should be recorded: as service, capital formation, income or financial transaction?
- (d) How to group the SPEs: financial and holding companies, royalty and license companies, factoring companies, etc.?
- (e) How to deal with SPEs created by government?

20. Most of these issues have been addressed in the context of the methodological guidelines of *Balance of payments Manual, 6th edition (BPM 6)* and *Benchmark Definition of Foreign Direct Investment, 4th edition (BD 4)* to which national accounts compilers may want to refer.

C. Goods for processing

21. Goods sent abroad for processing are defined as materials or semi-processed goods belonging to a unit in country A which are shipped to a unit in country B for significant transformation and then returned to the original unit in country A. The goods do not change ownership from A to B and B receives from the unit in country A just a fee for processing the goods, plus perhaps additional payments for related services such as transportation, insurance and handling of goods. The recording of processing has been extensively discussed during the updates of the *1993 SNA* and of the *BPM6*. The Inter Secretariat Working Group on National Accounts (ISWGNA) has requested the WGGNA to look into the main issues in relation to the implementation of the new recommendations on the recording of processing and to propose operational guidelines.

D. Toll Manufacturing

22. Toll manufacturing is similar to processing. An enterprise in country A sends goods to country B for further processing without changing ownership. The goods are then either cleared from B for home use or delivered directly to a third country C as a consequence of a transaction between the enterprise in A and the consumer in country C; the former includes the final value in its turnover. However, the exports from A are valued initially in customs source data only at standard cost price (as the final selling price may not be known at the time of export from A to B) leading to a difference between turnover and export values. The trade statistics export value must be replaced in Balance of payments (BOP) with the final sales value when the change of ownership is known.

E. Merchanting (including triangular trade)

23. Merchanting can be defined as the purchase of a good by a resident of country A from a non-resident in country B and the subsequent resale of the good to another non-resident; during the process, the good does not enter or leave the territory of country A. Three basic cases can be distinguished:

- (a) Global manufacturing: such activities aim to make profits from production of goods and the international transactions of goods take place as a process of such production activities;

- (b) Global wholesaling/retailing: such activities aim to provide their customers (original sellers and purchasers of the relevant goods) with wholesale/retail services and, as a result, obtain margin (or fee, commission);
- (c) Commodity dealing: such activities aim to obtain profits from the difference between purchased price and resale price of the relevant goods.

24. As in the case of processing, the recording of merchanting has been extensively discussed during the update of the 1993 SNA and the BPM. Here too, the ISWGNA has requested the WGGNA to look into the main issues in relation to the implementation of the new recommendations on the recording of merchanting and propose operational guidelines.

F. Consignment Goods

25. Consignment is a specialized way of marketing certain types of goods. The consignor delivers goods to the consignee, who acts as the consignor's agent in selling the merchandise to a third party. The consignee accepts the goods without any liability except to protect them from damage and receives a commission, when the merchandise is sold. The consignor does not give up ownership of the goods until their sale.

26. In the case of international trade consignment goods are exported to be stored and resold. In practice, these goods are recorded as merchandise exports when they cross the border, but should only be recorded in the Balance of Payments when ownership changes.

G. Commissionaire Trading

27. Enterprises can sell to a foreign distribution affiliate that then sells to a final customer. Alternatively, enterprises may sell directly to the final customer who has been identified by the local distribution company; the latter receives a sales commission fee. A change from the former to the latter type of arrangement causes overnight increases in exports that should be balanced by service imports (the service fees). This is an example of a change in operating structure that affects national statistics even though there may not appear to have been substantive change in the national operation.

H. Re-exports and centralisation of logistics

28. A good is imported to a country and, after some minor processing (like packaging and minor assembling), it is exported to a third country. It is not quite clear from customs documents, which are generally the data source, whether or not ownership actually changes, and consequently whether imports and exports of the relevant goods should be recorded or only a purchase of service. An example is the import of cars when some accessories are installed before the same cars move on as export to a third country. Another example relates to computers where the processing only consists of packaging, inclusion of a manual and the like. Often, the relevant activities are done within companies operating globally and distributing their products from one or more central places (e.g. the Netherlands or Belgium in the case of Western Europe).

I. Other centralised services

29. Several other ancillary activities within MNEs, such as financial administration, marketing and sales, call centres and the like may be centralised in a particular country. It may be problematic to arrive at an adequate recording of the relevant international service flows. This problem is very similar to the measurement of services from intellectual property (see item 1). It is also very much related to the more general problem of allocation of value added to output and value added to national economies (transfer pricing).

V. ISSUES IN RELATION TO HOUSEHOLDS, PERSONS AND EMPLOYMENT

A. E-commerce

30. The widespread use of the internet has enabled consumers to purchase products such as books, music and films through e-commerce. Increasingly these products are not shipped across borders on physical media, but are transmitted electronically (digitized products). As a consequence substantial statistical, taxation and trade policy issues arise. These trades may fail to be picked up by statistics for two reasons: (i) digitized products are difficult to register, and (ii) goods shipped as a consequence of an e-commerce activity such as physical books, etc. often correspond to transaction values below customs authority thresholds. In addition, many small e-commerce companies are poorly reflected in business registers and thus escape survey frames and most surveys miss final consumers' e-commerce purchases from abroad, partly because these consumers may not be fully aware of the products' overseas origin.

B. Labour mobility and trade in services through the movement of persons

31. International labour mobility has increased. For example, within the European Union there is a clear trend of increased labour mobility from the "new" EU members to the "old" members. Not all types of labour mobility are easy to catch in statistics. As a consequence, the measurement of labour input and productivity will become more problematic. Two specific problems can be identified:

- (a) How to get data on international contracting of services involving the movement of workers (workers sent by their foreign employers to the compiling economy in the context of services contracts including hired labour force via employment agencies), foreign self-employed persons as well as intra-corporate transfers? An important related issue can concern the measurement of labour productivity of industries, etc.
- (b) How to arrive at a proper recording and measurement of both the above categories and of non-resident employees employed in the resident economy for short period of time or recruited illegally?

C. Remittances

32. Economic liberalisation, migrant movements and rising number of cross-border workers has triggered a sharp rise in remittance flows in the last two decades. Remittances are important source of income for many countries and some studies even estimate that their volume is higher than overseas development assistance.

33. BPM6 identifies the standard components to allow compilation of remittances aggregates. Remittances are mainly derived from two items in the balance of payments framework: incomes earned by workers in economies where they are not resident (or from non-resident employers) and transfers from resident persons/households of one economy to resident persons/households of another. In spite of the definitions and concepts set out in the manual, there are many measurement issues linked to recording of these flows:

- (a) Total remittances may be difficult to estimate because of the absence of adequate source information. This is even more true when part of the remittances do not pass through the banking system.
- (b) Furthermore, migrants often invest in their economy of origin, e.g. financial investments and investment in real estate. These transactions are considered cross border investment and they should not be recorded as part of remittances in the balance of payments framework. However, it could be difficult to distinguish both transactions and, in some cases, investment transactions may be vehicles for the provision of remittances.
- (c) Acquisitions of goods and services by border and seasonal workers in the economy of their employment are not part of remittances and should be included under travel in the balance of payments. In practice it could be difficult to separate them.
- (d) Balance of payments and national accounts frameworks rest on the identification of residency, which may be difficult to follow in cases of migrant movements. It could be especially difficult when workers are hired illegally.

D. Tourism and second homes

34. In recent years the size of second home sector has been increasing constantly. In Europe, second homes have been gaining more and more attention. Relaxed border controls, and the rise of the low-cost airlines has made it easier for people to travel and consequently to invest in holiday and second homes abroad.

35. In parallel, there have been a growing number of studies on the implications of the second homes - economic, social and environmental. One of the main issues identified is the lack of statistical data to measure the scale of second homes, their characteristics and trends. The valuation of second home usage has been developed in the tourism satellite accounts. However, it has been recognised that this valuation is difficult and complex. Imputations have to be made. The imputations apply to the production of services by the second homes and to the consumption of these services.

VI. OTHER ISSUES

A. Foreign Direct Investment and related income

36. A number of issues may arise in the national accounts from cross-border activities of MNEs, which are captured in direct investment in the balance of payments. As noted above under section II, paragraph 9, modifying the transfer pricing used on goods and services by multinationals will affect the earnings, retained earnings, dividends and shareholders' equity of multinationals. As well, though the national accounts and balance of payments are harmonized

conceptually, these two systems are generally compiled from different data sources and techniques and by different data producing institutions (e.g., national statistical offices and central bank). Given that the rest of the world sector in the national accounts is largely derived from balance of payments data, differences in coverage and in statistical techniques between the two systems are largely to become more material as economies become more globalized. For instance, direct investment earnings are generally compiled from surveys whereas profits of the corporate sector can be derived from tax records that are adjusted for national accounts purposes. National accounts compilers should also be mindful of data compiled from counterpart economies, such as the upcoming Coordinated Direct Investment Survey, that may provide a measure of financial claims different from that produced with domestic data sources.

37. Another issue pertains to the increasing analytical and policy needs of identifying the transactions and positions of the foreign controlled corporate sector in the national accounts, referred to as Activities of Multinationals (AMNEs) for Foreign Affiliates Statistics (FATS). For instance, as economies increasingly globalised, policy interests may rise on delineating wages and salaries and research and development that arise from domestic versus foreign controlled firms. This may entail a tighter working relationship between national accounts and balance of payments compilers, such as the need to share survey frame and business register and to deal with confidentiality issues to the extent that these two datasets are compiled by different data producing institutions.

B. Transit trade

38. In the case of transit trade, goods go through a country without being declared for import in the relevant transit country. In principle, transit trade should not be a problem as there is no import and export, but only transport through the country. In practice, however, there may be measurement problems and the terminology may be used confusingly (transit trade vs. quasi-transit, re-export).

C. Common trading and currency block issues

39. Regional arrangements for economic and monetary cooperation are increasingly prevalent, with perhaps the most notable development being the creation of the euro area in the broader framework of the European Union. These arrangements both respond to, and help foster, regional economic integration, supporting an expansion in the growth in trade in goods and services across borders, and in the case of currency unions, reducing the impact of exchange rate volatility on such activity. The main statistical challenge for customs union is to identify new data sources for merchandise trade as customs data, the traditional data source, may become unreliable.

40. In monetary and currency unions, the rest of the world account/balance of payments data of national economies are still required for the compilation of national statistics, the conduct of economic and fiscal policies, as well as for representational purposes at international level (e.g. trade agreements). Some of the statistical challenges consist in the implementation of the resident concept in compiling data, respectively, for the individual countries and the union as a whole. This entails separately identifying non-residents between those belonging to the currency union and those that are outside the union. As well, cash holdings no longer have a national

identification though they need to be allocated among the countries of the union. Furthermore, the foreign currencies assets of national central banks that represent claims on other member of the currency union are classified as reserve assets in national external accounts whereas they are excluded from the reserve assets for the union as a whole.

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